Emergency Response Evaluation

Applying RMP to Emergency Planning

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Introduction

The purpose of this publication

Emergency Response Evaluation provides industry, Local Emergency Planning Committees and concerned citizens practical guidance in organizing and implementing a systematic evaluation of local emergency response capabilities. The evaluative process described in these pages is based upon certain premises: the inclusion of all major stakeholder groups in the process, use of "more probable chemical accident scenarios" generated under new federal law, use of the scenarios as a means of generating emergency response timelines, sponsorship by either your LEPC or by industry, and a mechanism for making -- and later tracking -- specific recommendations to agencies, industry and other decision-making entities such as city councils, county commissions and school boards**.**

The Evaluation is based on:
◆inclusion of all major stakeholders
◆use of "more probable" accident scenarios
◆use of scenarios to generate emergency response timelines
◆sponsorship by either your LEPC or by industry
◆a mechanism for making -- and tracking -- recommendations

National Institute for Chemical Studies, NICS

The non-profit National Institute for Chemical Studies, NICS, is an independent, science-based organization that finds practical solutions to health, safety and environmental issues. With the assistance of a Board of Directors that includes environmentalists, industry representatives and members of the regulatory community, the non-profit Institute promotes pollution prevention, risk communication, proactive compliance with regulatory requirements, accident prevention and emergency planning and preparedness. Through the generous assistance of the USEPA's Chemical Emergency Preparedness and Prevention Office, NICS was able to actively participate in two groundbreaking experiments that serve as a backdrop for this publication, *Safety Street* and the Community Emergency Response Evaluation Group.

Much of the language of the final RMP rule is a reflection of this ground breaking project in the Kanawha Valley.

Safety Street and the RMP

First of all, in advance of federal requirements to do so, chemical companies in the heavily-industrialized Kanawha Valley of West Virginia, in cooperation with emergency responders, concerned plant neighbors and members of the environmental regulatory community, developed "worst case" and "more probable" chemical accident scenarios and unveiled five-year accident histories. This bold initiative, named *Safety Street: Managing Our Risks Together*, was two years in the making. It was undertaken in anticipation of Risk Management Plan (RMP) rules mandated by Section 112(r) of the Clean Air Act..

The now-formalized RMP requires as many as 66,000 industrial facilities across the nation to develop and communicate to public chemical accident scenarios, their five-year accident histories, and accident prevention plans. This information must also be communicated to Local Emergency Planning Committee (LEPC) jurisdictions.

The National Institute for Chemical Studies' role as a mediating, "third party"during the two-year long *Safety Street* project was to encourage cooperation between the various stakeholder groups and provide technical and regulatory expertise. *Safety Street* culminated in a two-day long public outreach project that attracted some 800 participants from the environmental community, LEPCs, industry, local and national media, and federal and state agencies. Because of the intense interest in the RMP, most major chemical companies sent corporate-level representatives to *Safety Street*.

There was general agreement...that the process of dialogue and improved risk assessment, communication and reduction should go forward.

Safety Street was an overwhelming success in that it opened up lines of communication between all major stakeholders and attracted national and even international attention. Most important for local planning, it created powerful new tools to assess and reduce potential risks posed by chemical manufacture.

We'll have more to say about *Safety Street* later on. Its immediate lesson to communities preparing for RMP compliance is clear: citizens, industry, emergency responders and planners, as well as other stakeholders, can work

together to effect positive change. Despite the misgivings of those observers who said it would only create a wave of alarm, *Safety Street* shows that very sobering information about potential chemical accidents can, with the proper planning and communication techniques, actually build trust on the part of public. When they have been included in the process of risk assessment, the public is willing and able to assimilate complex technical information and accident scenarios in a spirit of positive change. In the regulatory sense, *Safety Street* was also a success, since much of the final language of the RMP is a reflection of this ground-breaking project in the Kanawha Valley. Participating chemical facilities were well-prepared when the RMP was finalized two years later.

CEREG - Community Emergency Response Evaluation Group

The second project that forms the backdrop for this handbook -- an evaluation of emergency response in the Kanawha Valley -- was a direct outgrowth of *Safety Street*. There was general agreement by participants in *Safety Street* that the process of dialogue and improved risk assessment, communication and reduction should go forward. Under the auspices of the Local Emergency Planning Committee -- the Kanawha Putnam Emergency Planning Committee, KPEPC, which represents Kanawha and Putnam counties in West Virgina -- industry, emergency responders, concerned citizens and NICS formed an *ad hoc* committee, the Community Emergency Response Evaluation Group, or CEREG. The two-year long evaluation process conducted by the CEREG forms the topic of this publication.

It was not by chance that this groundbreaking work took place in the Kanawha Valley. Because it serves as home to more than a dozen chemical facilities, most of which lie in close proximity to residences and schools, the valley is a valuable test site for innovative environmental, health and safety programs. For more than a decade, the National Institute for Chemical Studies has used the area as its principal site for developing and testing innovative community right-to-know programs, voluntary pollution prevention activities, in-place protection, educational materials, conferences and proactive compliance strategies. Another vital asset is the Kanawha Putnam Emergency Planning Committee. As one of the country's most active LEPCs, this organization provides an excellent vehicle for positive interaction and innovation.

The CEREG experience described here offers insights into how concerned citizens, emergency response planners and industry can interact to upgrade community planning and response. *Emergency Response Evaluation* offers practical suggestions about how to organize a similar project in your community.

In providing this document, the National Institute for Chemical Studies has focused on methods and goals that, we feel, apply broadly to other regions. We would never suggest that "once size fits all," so it becomes the reader's task to decide what applies to his or her locale.

What can you expect from an emergency response evaluation?

◆compliance with Risk Management Plan of the Clean Air Act
◆improved communications with the public, and
◆improvements in emergency response

We will share with you insights into what worked and what didn't work, how the participants in the project set specific goals, and how the emergency response issues raised during this process were passed on to decision-makers. We will suggest how to avoid potential problems that can slow down -- or even derail -- the process. We will offer communications strategies that help "level the playing field" so that technically-trained participants from industry and the emergency response community can interact in a meaningful way with concerned citizens. We hope also to impart a sense of how such a project can not only help in compliance with the RMP but also help build bridges between the community, industry and emergency agencies while leading to real change.

This spirit of cooperation, we believe, can have very positive implications for future cooperation and progress in your area. It is our belief that communities nationwide can profit from the lessons learned during the *Safety Street* and CEREG projects undertaken in the Kanawha Valley.

What this publication will show you how to:

- bring credibility to your Evaluation
- set clear goals
- structure a successful Evaluation
- use goal-oriented methods
- organize general meetings, focus groups and surveys
- utilize meeting facilitators
- use Risk Management Plan information
- focus on practical emergency response issues
- gather useful information
- evaluate the information
- organize your findings and recommendations
- establish a format for tracking recommendations

II. Evaluating emergency response:

whose job is it?

Risk does not stop at the plant fence...

The benefits -- and risks -- posed by modern, industrialized society are shared by all members of the community. Risk does not stop at the plant fence or on the periphery of a transportation corridor. At the National Institute for Chemical Studies, NICS, we believe that in a democratic society, all of those who share in the risks should share in devising plans to deal with those risks. The participation of concerned citizens is essential to the credibility of any emergency response evaluation and, indeed, should be at the core of any project aimed at assessing, communicating and reducing risk. Community involvement in understanding risks and having a say in emergency planning is solidly anchored in federal law, specifically in the Emergency Planning and Community Right-to-Know Act (EPCRA) and, in many cases, in state law. Citizens have fought for and won the struggle to have a say in matters that potentially affect their health, safety and environment. In recognition of this fact, many industries have begun initiatives aimed at improving communications with their neighbors.

"...The participation of concerned citizens is essential...."

Accepting the validity of citizen input is the starting point for the process described in these pages, but exactly what shape is this community participation to take?

Accepting the validity of citizen input into environmental, health and safety issues serves as the intellectual starting point for the process described in these pages. But it is only a starting point. Putting this belief into practice raises many difficult questions. First of all, exactly what shape is community participation to take? What practical experience will help make citizen involvement meaningful and not just cosmetic? More specifically, how are safety professionals to find a language common with concerned citizens? Are there ways to "level the playing field" so that the public can fully interact? How can we help the public engage in a meaningful discourse with emergency planners and responders who deal on a daily basis with technical issues related to planning for and responding to emergencies? These are questions all communities hoping to start anemergency response evaluation must face.

The Risk Management Plan:

Section 112(r) of the Clean Air Act

Section 112(r) of the amended Clean Air Act -- the Risk Management Plan, RMP -- seeks to improve local emergency preparedness and response, pollution prevention and worker and community safety. The RMP complements and supports the Emergency Planning and Community Right-to-Act of 1986, EPCRA. In this regard, the RMP encourages industry, emergency responders and the community to work together. Public disclosure is an important aspect of the RMP, which was signed into law in November of 1990. The final rule for risk management planning, promulgated on June 20, 1996, bears the imprint of groundbreaking work in the Kanawha Valley of West Virginia (see discussion of Safety Street, above). The RMP also builds upon the Occupational Health and Safety Administration's (OSHA's) Process Safety Mangement standard, PSM, and upon safety standards promoted by many individual companies and industry umbrella organizations.

In essence, the RMP requires reporting facilities (plants) to identify and assess chemical hazards, share this information publicly, and work with the community to develop risk reduction and management plans. It is expected that some 66,000 facilities nationwide will be covered by the RMP. Under the rule, any source having more than the threshold quantity of a regulated substance in a single process must comply with the regulation. The precise terms of compliance, however, depend upon the size and risks posed by individual process. This has led USEPA to formulate three levels, or "programs", of compliance. Program 1 applies to processes for which a worst-case release would not affect the public. Usually these are geographically remote locations with no history of serious offsite consequences from an accidental release. Program 2 refers to less complex operations not involving chemical processing. Program 3 is for higher risk, complex chemical processing operations and for processes already subject to the OSHA PSM. Assistance to small and medium-sized businesses is available through Small Business Assistance Program in individual states and through the Federal Small Business Assistance Program. Assistance is also available through the network of Small Business Development Centers, the EPCRA Hotline (listed at the bottom of the next page), and online information sources.

A glance at the basic components of RMP makes it clear why an early start is vital.

RMP Basic Components

- Worst-case and alternative accident scenarios (offsite consequence analysis),
- A five-year accidental release history for covered substances and processes,
- An integrated prevention program to manage risk,
- An emergency response program,
- An overall management system to supervise implementation,
- A risk management plan revised at least once every five years that summarizes and documents these activities.

But the burden is not solely upon industry. Communities are expected to develop appropriate emergency response plans based upon industry-supplied information. This interaction between industry, emergency responders and planners, and the community at-large is, in many areas, a relatively new experience. Some RMP-regulated industries have well-established communications vehicles. Many do not. This publication shows how one chemical-producing community constructed an Emergency Response Evaluation process that involved all stakeholding parties.

The deadline for RMP compliance -- June 20, 1999 -- is looming. Based upon our experience in the Kanawha Valley, it is our firm belief that compliance with such a comprehensive rule will -- or at least should -- motivate industries and communities across the nationwide to prompt action. RMP compliance cannot be achieved in a day.

For more information on the RMP, contact the Emergency Planning and Community Right-to-Know Hotline at 800-424-9346 or (703) 412-9810
TDD (800) 553-7672
~~Monday through Friday, 9 a.m. to 6 p.m. (Eastern time)~~
or visit the USEPA Chemical Emergency Prevention and Planning Office (CEPPO) Home Page on the World Wide Web at: http://www.epa.gov/swercepp

Accident scenarios

Accident scenarios generated as part of compliance with the RMP serve as logical starting points for an Emergency Response Evaluation. They give shape to the discussions between the various stakeholder groups, and drive home the seriousness of the issues at hand. They make it possible for participants in these discussions to create emergency response time lines, discover discrepencies and identify issues. Just as importantly, they help stimulate participants to ask highly targeted questions.

The Risk Management Plan (Section 112(r) of the Clean Air Act) requires industry to develop more probable *and* worst case scenarios. In the Kanawha Valley, worst case scenarios (although prepared) were rejected for the Evaluation because they are premised upon extremely unlikely chains of events. The more probable scenarios developed during *Safety Street* were deemed more practical vehicles for discussions about planning and for evaluative purposes.

Accident scenarios help participants in the Emergency Response Evaluation create emergency response time lines, discover discrepancies and identify issues.

There are important lessons to be learned from the Kanawha Valley experience. RMP requirements actually contain many of the groundbreaking ideas developed in the Kanawha Valley *Safety Street* Project. The success of *Safety Street* was based upon long, and at times, difficult preparations. The process nearly broke down several times. Accident scenarios present very sobering information. Some participants in those early discussions feared that unveiling accident scenarios -- whether premised on worst case or more likely events -- might result in widespread panic, declining property values and a strong anti-industry backlash. The reason these dire predictions proved to be unfounded should interest all communities.

Above all, the Kanawha Valley experiment worked and had substantial credibility because the major stakeholder groups were involved from the start. Concerned citizens, industry representatives and members of the emergency response community and other agencies learned how to work together as equals in a process that sought to assess and minimize shared risks. We feel strongly that the involvement of a science-based, nonprofit entity such as the National Institute for Chemical Studies was also a positive facilitating factor in keeping the process together. The sponsorship of the Local Emergency Planning Committee, the KPEPC, also provided an effective foundation upon which to build an inclusive process such as this.

"Some...feared that unveiling accident scenarios...might result in widespread panic, declining property values and a strong anti-industry backlash. The reasons these dire predictions proved to be unfounded should interest all communities."

A pro-active attitude on the part of industry was also a key element during *Safety Street* and during the ensuing Emergency Response Evaluation. In almost all cases, plant managers in the Kanahwa Valley are used to working face-to-face with citizens through Citizen Advisory Panels, the NICS Board of Directors and many committees, the LEPC and other forums. This longstanding interaction has resulted in a degree of trust and ability to work together.

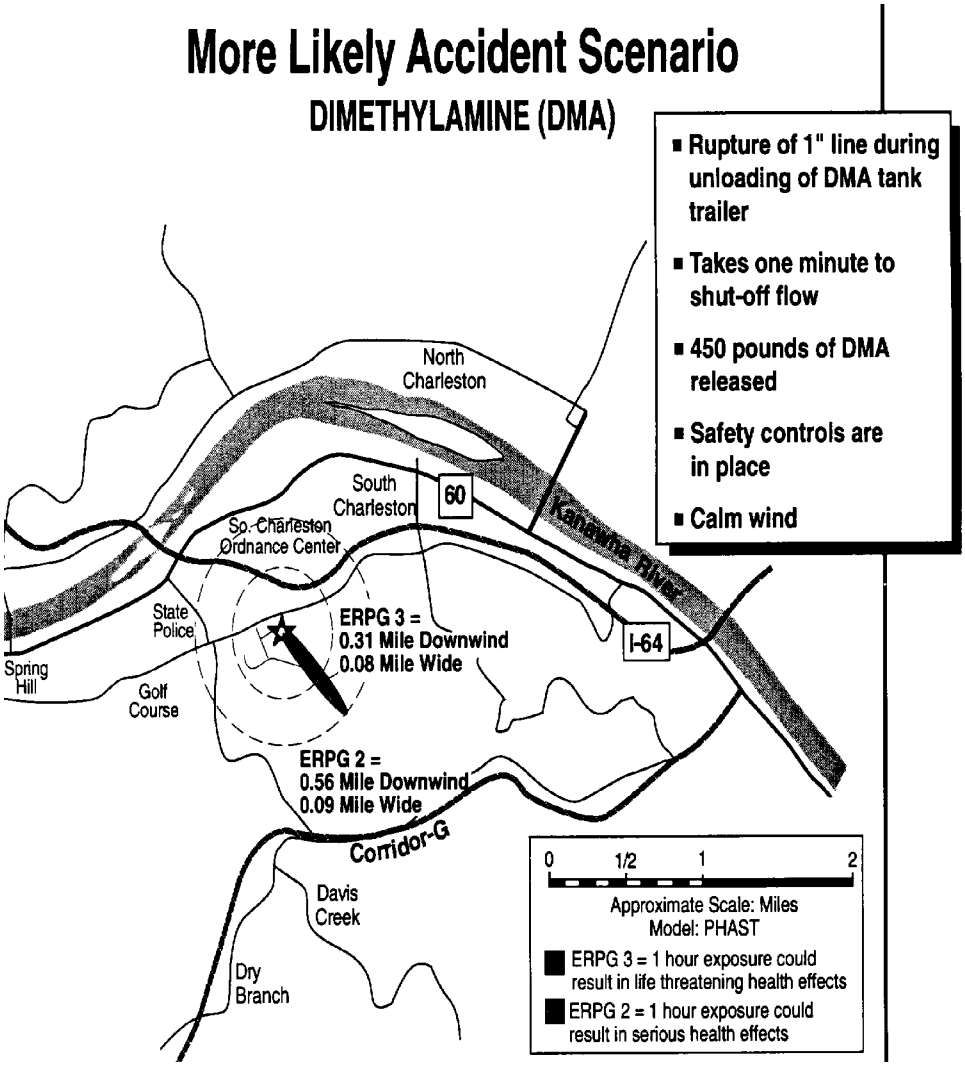
These lessons about emergency response evaluation we are fashioning deal with citizens who have expressed a more than passing interest in the subject. If Emergency Response Evaluations are organized well, there is no reason for industry or responders to hesitate to publicly discuss potential accident scenarios. Those citizens who are concerned enough to attend a series of public meetings want to be part of serious risk assessment and planning measures. These citizens are part of the solution. Overall, worst case and more probable accident scenarios developed during *Safety Street* built bridges between the community, industry and agencies, and were greeted by the public and print and broadcast media with intense interest but in a positive manner.

"Those citizens who are concerned enough to attend a series of public meetings want to be part of serious risk assessment and planning measures. These citizens are part of the solution..."

"Instead of creating a wave of fear, as some had predicted, *Safety Street* was a very positive experiment in risk analysis and risk communication," said Dr. Paul L. Hill, Jr., President of the National Institute for Chemical Studies. The credibility and technical learning curve that came with having the community involved lent a high degree of credibility to the entire project."

This positive experience encouraged participants in the community, industry and the emergency response community to see *Safety Street* as a first important step in an ongoing effort to improve planning.

Here is an example of a **More Likely Accident Scenario**:



Emergency Response Planning Guidlines, ERPG, explained

The Emergency Response Planning Guidelines, ERPG, established by the American Industrial Hygiene Association contains estimates of concentration ranges for substances based on anticipated adverse health effects. These estimates are used in emergency response planning activities.

ERPG III

Exposure to ERPG III levels for up to one hour could potentially result in serious health effects up to, and including, death.

ERPG II

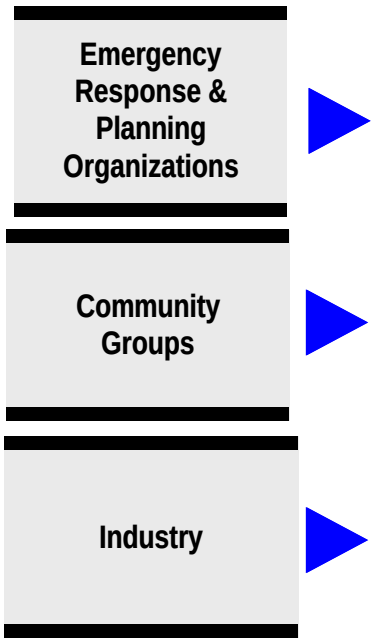
Exposure to ERPG II levels for up to one hour could potentially result in acute to serious health effects.

ERPG I

Exposure to ERPG I levels for up to one hour could potentially result in mild, transient adverse health effects.

III. Before you start -- some basic considerations

If putting together an Emergency Response Evaluation appears at first glance to be a "steep climb," remember that communities across the nation will be facing the same challenges. RMP compliance, improved industry-community relations and upgraded emergency response won't be achieved overnight or easily. But based upon experience gathered in the Kanawha Valley and other chemical-producing regions, we know that stakeholders representing a broad range of perspectives, concerns and technical training *can*, in fact, work together productively in evaluating emergency response. Remember that what makes this entire process easier is that all stakeholders share **an intense, mutual concern about health and safety issues**. Even when problems arise, this will provide a solid basis for dialogue. A positive, practical dialogue experience between members of the following stakeholder groups can be created:



Local Emergency Planning Committees (LEPCs), State Emergency Response Commissions (SERCs), fire departments, emergency medical services, law enforcement agencies, hospitals, county commissions, state and city government

Environmental groups, churches, civic organizations, plant neighbors, existing industry-community forums such as Citizen Advisory Panels (CAPs), which are organized under the auspices of the Chemical Manufacturers' *Responsible Care*® program

Especially management and environmental, health and safety personnel in any industry covered by Risk Management Plan rules

Who Sponsors It? Who Pays?

One of the early questions will be, Who in your community should sponsor an emergency response evaluation? The official sponsor of the Kanawha Valley evaluation was the Local Emergency Planning Committee, in this case the Kanawha Putnam Emergency Planning Committee, KPEPC. As the official organization appointed by the West Virginia State Emergency Response Commission (SERC), the KPEPC provides local emergency planning leadership and serves as an important forum for emergency responders, industry and concerned citizens to work together.

There are certain advantages to having your Local Emergency Planning Committee (LEPC) sponsor the effort. A certain neutrality -- and therefore higher degree of credibility -- might be associated with the project if sponsorship comes from the LEPC, since it is a federally-mandated organization with diverse membership and specific reporting and planning responsibilities.

The question of financing should be considered carefully. The emergency response evaluation you are fashioning should be impartial in deed and appearance. We highly recommend the involvement of the LEPC as the lead organization. Under this arrangement, the LEPC becomes the sponsoring and, strictly speaking, the financing organization even if, as was the case of the Kanawha Valley project, funds ultimately come from industry or other sources.

The Evaluation is not an extremely costly undertaking except in terms of time committment.

The Emergency Response Evaluation is not an extremely costly undertaking except in terms of time commitment. Industry, or an industry group, will probably be the most likely source of funding to cover administrative support activities such as photocopying, mailings, and expenses related to holding meetings. Other possible funding sources include county government, citizen groups, hospitals, emergency response agencies such as fire departments, 911 jurisdictions, law enforcement agencies, or a combination of these organizations. A collaborative funding effort is preferrable and more credible to most stakeholders.

Group building: it relies on finding a common purpose

It has been our experience that the best way to bring diverse groups together for a project is to first identify common concerns and goals. Participants in your Emergency Response Evaluation come from very different walks of life, and will no doubt have unique perspectives on emergency response issues. But they're likely to agree on the need for:

Group building is not difficult when you start from such a strong basis of shared concerns.

- **Improved emergency planning and response,**
- **A dialogue that respects all participants,**
- **A frank evaluation of resources *and* expectations,**
- **Recommendations to official agencies such as the LEPC, fire and law enforcement officials and industry who can bring about actual changes.**

Group building is not difficult when you can start from such a strong basis of shared concerns.

So far, we have discussed several practical issues to consider during the startup phase. They include: who should be the sponsor, who should pay, and who should take part in an Emergency Response Evaluation. We have briefly discussed the regulatory framework, the RMP, that is providing industry and emergency planning entities nationwide a strong impetus to assess, communicate and reduce risks posed by hazardous chemicals. In considering how to organize a meaningful Emergency Response Evaluation, we have also established basic shared concerns around which various stakeholders can build a sense of common purpose and which provide a foundation upon which to build an evaluative process. We will progress soon to a "nuts and bolts" discussion of how to conduct the Evaluation. But before we do, let's pause to consider two underlying questions, the answers to which will affect the quality of your Evaluation:

- **How do you establish a process that will have credibility with all stakeholders?**
- **Do you have a general sense of public awareness of risk and emergency planning issues in your community?**

Credibility

Above all, the emergency evaluation process described in this report relies on its credibility with all stakeholder groups. This intangible quality, credibility, will determine the effectiveness of the process and whether or not all stakeholders put stock in the results of your hard work. As a "bridge building" institution with more than a decade of experience in involving various stakeholder groups in positive, solution-oriented discussions, the National Institute for Chemical is more convinced than ever that health, safety and environmental decisions reached in a spirit of compromise and mutual respect have far greater credibility with the public. That's because decisions reached in this inclusive, democratic manner have, in fact, *earned* credibility. But earning this credibility takes planning, sensitivity and hard work.

Give careful attention to finding a representative cross section of participating stakeholder groups.

Don't shy away from inviting some of your most outspoken critics.

First of all, give careful attention to finding a representative cross section of participating stakeholder groups. Attention should be given to finding key members of all interested groups who reflect a balance of stakeholders' age, occupation, race and professional, civic and religious affiliations. By "key members" we mean those stakeholders who will act as conduits for information between the Evaluation and the public. Also, do not shy away from inviting some of your most outspoken critics of past health, safety and environmental performance. One of the best ways to earn credibility is to seriously consider the views of those who are most critical. And most importantly, recognize that concerned citizens often have the best perspective on what works and what is trusted in the community during a chemical emergency.

Furthermore, remember that this inclusive approach holds true not only for the public meetings, but also for the planning and follow up stages of the process. The entire credibility of the Evaluation depends on your willingness to involve concerned citizens from the start. That means listening to and respecting their views, discussing their concerns, answering their questions in a jargon-free manner and, when feasible, acting upon their suggestions. It also means providing feedback about the current status and final outcome of their suggestions even if a citizen's ideas are not enacted. This feedback is essential to long-term trust building.

In short, when you ask concerned citizens to volunteer a considerable amount of their free time to a project that benefits the public good, it is your responsibility to make good use of what they have to offer. By doing so, you will greatly increase the credibility of the entire process. And you will make your community's Emergency Response Evaluation more effective.

All of this is not to say that this inclusive approach makes it *easier* to conduct an Evaluation. In fact, it would streamline the evaluation if you were to include only safety professionals, most of whom will already know each other and understand the language, financial and legal restraints and technical issues associated with emergency response. Making your Evaluation more diverse and representative of the community means that the professional will have to be willing at times to explain such topics from the beginning. And that is not easy.

In the Kanawha Valley experience, general meetings and focus groups generated honest disagreements at times. A group leader said, "The topics we dealt with had the potential for leading to an atmosphere of confrontation, especially because of recent accidents just before the evaluation was to take place." But confrontation was definitely not the order of the day. Instead, the Emergency Response Evaluations uniformly took place in an atmosphere of mutual concern and interest in improving emergency response. As the same leader put it, confrontation "just didn't happen." Pending class action lawsuits at one of the four locations may have caused some initial delays while corporate attorneys considered the possible ramifications of an Evaluation. But once the Evaluation proceeded, we discerned no inhibitions on the part of any stakeholders to participate fully and constructively.

Emergency response is not only a technical issue -- Incident Command System, radio frequencies, Personal Protective Equipment, air monitoring devices, etc. It is this and much more. From the community perspective, it is also an *emotional* topic -- one that goes at the heart of what we hold most dear, the safety of our loved ones. The overwhelming atmosphere of the many general meetings and subcommittee sessions in the Kanawha Valley was of intense interest in finding solutions. We believe that the objectivity and effectiveness of these meetings only increased as the participants worked together.

Emergency response is not only a technical issue.. It is also an *emotional* topic -- one that goes at the heart of what we hold most dear, the safety of our loved ones.

It is not only important to personally invite key community members, but also to make sure representatives from all involved emergency response and planning agencies are invited. Several observations about these groups: coordination within law enforcement circles was usually quite good. We were pleased also at the degree to which EMS personnel knew their peers and were used to working together. And the considerable number of mutual aid agreements between area fire departments was impressive.

At the same time, you might be surprised to discover how seldom EMS, law enforcement and fire departments meet with one another. The Emergency Response Evaluation can help with this problem. Coordination among the various response agencies is important. The cooperation between volunteer and professional fire departments , for example, is often a real issue that, with planning, can improve emergency responses. Even in areas in which mutual aid agreements can be found, response agencies are often not fully aware of each others' current resources.

You might be surprised how seldom EMS, law enforcment and fire departments meet with one another...

The same inclusive approach applies to industry. Plant environmental, health and safety personnel, as well as on-site responders, should be involved from the start. Their intimate knowledge of accident scenarios, on-site mitigation equipment, plume modeling and early notification to the community puts them at the center of any in-plant accident. In industrial sites with their own fire and hazardous materials squads, they are the true "first responders."

One of the key lessons about obtaining the participation of industry and the response community is to first explain the purpose, goals and methods of the Emergency Response Evaluation to superiors within these respective organizations. Ask plant managers, for example, to commit to the stated goals of the process and to assign specific personnel to the Evaluation. To secure the participation of law enforcement, firefighters and EMS personnel, you need to explain the Evaluation to mayors, city managers, city councils, fire chiefs, police chiefs. Often, emergency responders do not have the authority simply to decide to attend a series of meetings that will take them from their assigned duties. Their supervisors have to make that sort of commitment of personnel and time.

One of the potential side benefits of the Evaluation can be interaction -- in a non-emergency situation -- with local media. The fact that various stakeholders are taking the time to come together to work on emergency response issues is a positive story.

Public awareness

To put together a productive evaluation that includes the public, it is very helpful to have an accurate general sense of public awareness of risk and emergency planning issues in your community. Many factors will determine the willingness of citizens in your community to become actively involved in the Evaluation and to support its consensus-seeking role. First of all, industry's safety and environmental record affects citizens' degree of support, scepticism or even cynicism toward local plants and toward a community-based evaluation of emergency response. As a general rule, the better the safety and environmental record, the less critical the public is likely to be. Conversely, a safety/environmental record that is perceived by the public as problematic is more likely to translate into lessened trust.

Remember, though, that the Evaluation has positive results at several different levels: improved communications, better emergency response and using RMP for practical planning purposes. In cases where community-industry relations have suffered and citizen involvement in the Evaluation might be problematic, remember that you are taking a step in the right direction. You are entering a dialogue to address *shared* risks. The Evaluation is not a public relations ploy. If done properly, it results in real-world improvements in emergency response, which benefit citizens, industry and emergency responders alike. And it makes practical use of RMP information. But do not underestimate the value in the dialogue process *in and of itself*. It can create a foundation upon which improved relations can be built.

"..Do not understimate the value of the dialogue process *in and of itself*. It can create a foundation upon which improved communications can be built."

Remember also that your Emergency Response Evaluation is not only a technical, logistical exercise. It is a very intense risk communication effort that involves not only "the experts" but also the affected public.

"Remember also that your Evaluation is not only a technical, logistical exercise. It is also a very intense risk communication effort..."

It is important to understand that the history of your community will also affect your

Emergency Response Evaluation. For some seventy-five years, the history of the Kanawha Valley of West Virginia, for example, has been closely tied to industrial production, especially to the chemical industry. This translates to a strong identification with the chemical industry. In the Kanawha Valley, a great number of citizens spent their entire working careers as employees of chemical companies -- and retired and current chemical company employees and their families and friends are a highly visible element of the community. As is the case in most industrialized areas, the presence of present and former plant employees and their families and friends can clearly be felt in the cultural, political, religious affairs of the community at every level.

"In most industrialized areas, the presence of present and former plant employees and their families and friends can be felt at every level in the cultural, political and religious affairs of the community."

Understanding the way industry, emergency responders and the community at-large interact can prove invaluable to an Emergency Response Evaluation. Before starting your Evaluation, have your Steering Committee discuss the general background of industry in your community. Is there a longstanding reliance upon the industries in question? Do these industries also present certain potential risks to the community?

With chemical facilities providing such a pivotal role in the economic picture of the Kanawha Valley, it should come as no surprise that, as demonstrated by several recent public opinion polls, the public is keenly aware of the economic benefits industry provides. What is the economic situation in your community? How dependent is your economy upon risk- and job-producing industries? These "trade-off" factors influence citizens' perceptions of "acceptable risk." And they are underlying factors that can affect the level of citizen participation and the willingness of citizens to speak out.

We have seen in the Kanawha Valley that a relatively high degree of dependence upon the economic benefits of modern industry does not translate to a blind acceptance of all risks or apathy toward accidents. Furthermore, public awareness of risks and "acceptable" levels of risks are also subject to dramatic change. The close interaction of community and industry over the past seventy-five years in the Kanawha Valley, for example, took a sudden turn in 1985. The Bhopal, India, chemical disaster awoke citizens here to the stark reality that the same chemical involved in that accident so far from home was also produced in their midst. Complacency about the potential risks was very quickly replaced by the pressing question, "Could Bhopal happen

here?" For more than decade, this very urgent question has, in a very real sense, energized the debate in the Kanawha Valley and, indeed, the entire nation, over risk assessment and reduction, public right-to-know, pollution prevention, and hazardous materials.

What is the accident history and overall environmental record of industry in your area? Accidents dramatically undermine the public trust and affect citizens' perception of acceptable risk. On the other hand, these unfortunate events also provide concrete examples of the effectiveness of emergency plans and how much the public understands, trusts and will follow those plans. Accident prevention is clearly the top priority. But when accidents occur, we should learn from them. They offer real life examples of what does -- and doesn't -- work. Drills are another prime source of information. In addition to their immediate value in terms of planning, they offer important opportunity for involvement. Industry should invite the public, local media and emergency response planning and response agencies to participate in or observe drills.

"Accidents dramatically undermine the public trust, and affect citizen's perception of "acceptable" risk."

Economic factors, as well as industry's own accident record, are decisive background factors affecting public awareness of environmental, health and safety factors. In considering an emergency response evaluation process that includes not only the views of "insiders" in emergency response and planning but also the concerns of the community, it is well worth the time to consider the level of public awareness in your community.

In the past decade, an evolving public awareness nationwide has led to a host of Right-to-Know measures and environmental protection acts, including the Clean Air Act and its many provisions. This dawning consciousness also led to the founding of the National Institute for Chemical Studies. A host of subsequent environmental, health and safety laws in the decade since Bhopal has kept the focus on the Kanawha Valley and other chemical-producing regions, where citizen activism has taken the form of several industry-citizen panels and watchdog groups. All the activism, however, has not just been on the side of the environmental community or in regulatory agencies. In many cases, industry itself has made an effort to communicate better within its own ranks on emergency planning issues. During the past few years, chemical manufacturers have begun sponsoring Citizen Advisory Panels organized under the auspices of the Chemical Manufacturers Associations' *Responsible Care*© program. In the Kanawha Valley and certain other areas, plant managers also meet on a regular basis for discussions.

It is essential to know your community before you start your Evaluation. In the Kanawha

Valley, the involvement of a highly active LEPC that enjoys the participation of industry, emergency officials and concerned citizens established credibility. From the beginning, we relied upon the participation of such groups as Citizen Advisory Panels, the KPEPC, NICS, and many of the same emergency responders on both sides of the plant fence who took part in *Safety Street* to participate actively.

These are they type of background factors and resources that can directly affect your own Emergency Response Evaluation.

When it comes to securing the involvement of concerned citizens outside the LEPC, you will have to be more creative. Your success will be determined by several factors. What forums exist that are already involved in environmental, health and safety issues? Are there any citizen advisory panels, grassroots groups, church organizations, civic service clubs active that can be called upon to volunteer time to participate? Can community leaders be identified and asked to attend?

When it comes to securing the involvement of concerned citizens outside the LEPC, you will have to be more creative.

Your appeal to citizens should be straightforward: their involvement in emergency response issues can make a real difference. This is not just a matter for emergency responders and industry. It is a community issue.

All of this raises important planning questions. Should public participation in these meetings be by invitation only? (We believe not.) Should the meetings simply be announced in the local media -- or should certain community leaders be targeted and personally invited? We recommend a combination of strategies. You should use newspaper and radio advertisements, as well as mass mailings to plant neighbors (possibly by zip code) to encourage those not already involved in emergency response issues to attend. At the same time, you should make a special effort to personally invite those community leaders who have the respect of key stakeholders and groups in the community. Their participation has several advantages.

First of all, they represent certain segments of the community, and with the proper encouragement can usually be expected to express the views and concerns of plant neighbors.

Secondly, during and after the Evaluation, these leaders have the means to report the findings of the process to the community.

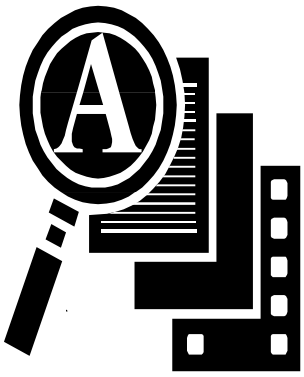
And thirdly, if these concerned leaders feel that their participation has really made a difference, you have made major progress toward establishing a cadre of informed community representatives for future emergency planning and prevention projects.

The Media

One note about media participation in your Evaluation: The media are an often-overlooked aspect of emergency response evaluation and planning. But during an event, they are the principal conduits of information to the public. It is well worth the effort to personally invite print and broadcast journalists to be a part of your Evaluation. Your chances of gaining their participation are greatly increased by suggesting several possible news stories about the process itself. That gives journalists -- and their results-oriented assignment editors -- short term results.

There is also great longterm value in establishing positive relationships between the media, industry and responders. These connections serve all sides well during the stress of an emergency.

V. Methods (or: "how to get there from here")



As the name implies, the essential purpose of an emergency response evaluation is to *evaluate*. As one community activist explained, "CEREG is not the *fixing* group. It's the evaluating group. We give an objective evaluation of what we find." Using accident scenarios and survey tools, the process helps concerned citizens, industry and emergency responders and planners carefully review emergency response issues.

More specifically, the goal is to recommend improvements in the emergency response plans of your Local Emergency Planning Committee, SERC, local emergency response agencies such as EMS, fire, law, hospitals, and, of course, within manufacturing facilities themselves. Your recommendations should aim to improve emergency response, increase public safety and awareness of protective action measures, support resource sharing and training capabilities, and encourage better communications between emergency responders and planners and the community at-large.

Soon, we'll discuss specific suggestions about organizing and conducting general meetings and focus group sessions in ways that produce useful results. Then we'll present ideas about how to gather survey data. But before we proceed, let's take a quick look at the essential tools you have to achieve your goals.

The essential tools of the Evaluation process are:

- **dialogue (from meetings), and**
- **data (from surveys)**

The principal tools at your disposal are:

- **Dialogue** among the various stakeholders involved in emergency response and planning,
- **Data** regarding local emergency response agencies and the communty

Dialogue: basis for trust

Dialogue is the cornerstone of trust-building. Discussions involving all major stakeholder groups must take place in an atmosphere of respect and shared concern for the issues at hand. The Kanawha Valley experience points out that even though concerned citizens might not share the same technical language with engineers and emergency planners, they offer a valuable outside perspective. Concerned citizens are often the best source of feedback about:

- **how current emergency notification measures work,**
- **if public education efforts are adequate,**
- **whether the public trusts, and is willing to follow, official instructions in an emergency.**

Often, representatives of industry and the emergency response community are already on a first-name basis. They may differ over specific issues, but they deal with similar issues on a professional basis. The information gap is greater, however, between concerned citizens and professional responders and emergency planners. Without the proper guidance, public meetings could become "insider" discussions. This would be a disservice to citizens and would, in fact, limit the perspective of the Evaluation.

The Kanawha Valley experience shows that one of the best ways to establish a meaningful dialogue in this regard is the use of a **facilitator** whenever possible. The facilitator of the general meetings can be a member of the Local Emergency Planning Committee or a representative of non-partisan organization such as the National Institute for Chemical Studies. Or she or he can be a hired professional facilitator who is adept at working with a wide range of participants. We would consider all of the above to have a high degree of credibility with citizen participants.

To establish a meaningful dialogue, use a facilitator who:
- **makes sure experts do not dominate discussions,**
- **allows all stakeholders to air their views,**
- **keeps meetings running smoothly**
- **records the emergency response time line and all comments**

Structuring the process

Organized -- and flexible. That might seem a tall order in structuring your Evaluation. But it can be done. We are suggesting a certain organization to your approach. As you read the following suggestions, however, remember that these are general guidelines. By remaining flexible, you can adapt these ideas to the realities of *your* community. Whenever in doubt, refer to your underlying purpose(s): to build better communications between the major stakeholders, to study emergency response capabilities and make recommendations for improvements, and, from the perspective of industry, to move toward RMP compliance.

You are fashioning an inclusive process, one that reflects not only the views of "insiders" but also the concerns and questions of citizens who share in the risks. In structuring meetings, keep these overarching goals in mind. Structure meetings so it is clear up front how long you expect them to run. This tends to keep the discussion on track. Open-ended meetings often accomplish less than those that have clear starting and finishing times. If the group cannot finish its work in the time alloted, you can always take a vote whether to extend the meeting or schedule an extra session.

In reflecting upon our experience in the Kanawha Valley, we were satisfied with the following series of meetings:

Three general meetings were held. Following the first, introductory meeting of all stakeholder groups, focus (or "breakout") groups met to discuss emergency response from the standpoint of the community, industry, and emergency responders. Then came a second general meeting, which was followed by a final general meeting. All of this usually took place within a four to five-week period.

We'll have more to say later about the purpose of each of these meetings. But for now, let's briefly discuss who actually attended the meetings. Then we'll make a few logistical suggestions.

The general meetings were attended by an average of some 30 persons. A review of the affiliations of those attending reveals, not surprisingly, that industry and emergency response personnel made up the bulk of the participants. Industry and emergency response and planning organizations were, in general, extremely supportive of the entire process. Industry, in particular, supplied meeting sites (usually at "neutral," that is, off-plant, locales), paid for refreshments and supplied plant personnel in the areas of emergency response and environmental, health and safety to provide technical information and leadership and, in some cases, to fill the roles of focus group facilitators. Overall leadership of the general meetings was provided by the chairperson of the Emergency Response Evaluation Steering Committee, who is also an LEPC board member.

The special efforts made to invite concerned citizens and community leaders paid off. On average, about one-fourth of the participants came from the community. They provided a strong community perspective on the emergency response issues raised, and took active part in the work of all three subcommittees. It is important to note that at least one representative from each stakeholder group, in fact, took part in all three of the subcommittees. This gave a more balanced approach.

Focus groups & facilitators

"There is a very real danger that without a strong, democratically-minded facilitator, the concerns of participating citizens will be overwhelmed by insider talk."

When it comes to the breakout sessions -- which we call **focus groups** -- it may be hard to find trained facilitators. Ideally, impartial, professional facilitators who are familiar with emergency response and group dynamics would be hired for the job. It's more probable, though, that facilitators will come from industry. In our experience, this generally worked well. A word of caution, though, is in order: it is no easy task to keep meetings running smoothly and make sure that all the viewpoints in such a diverse group are heard. There is a very real danger that without a strong, democratically-minded facilitator, the concerns of participating citizens will be overwhelmed by insider talk. If this happens, the credibility of the process can be impaired. For these reasons, we strongly recommend a training session for all focus group facilitators. The purpose of this training is to

We strongly recommend a training session for all focus group facilitators.

familiarize facilitators with the accident scenarios, the key players in the discussions and the main issues. It is especially important that facilitators should be sensitized to group dynamics and the potential problems that might arise. Providing a single training session won't make anyone an expert facilitator. But it will help provide consistency.

In the type of Evaluation we are suggesting, Focus Groups are not open-ended discussion groups. Instead, they have very specific tasks -- namely to use more probable accident scenarios to generate an emergency response timeline. Along the way, Focus Group participants are expected to generate questions, issues and comments. The Focus Group Facilitator records those comments and keeps the discussion on point.

"...Focus Groups are not open-ended discussion groups. Instead, they...use more probable accident scenarios to generate an emergency response timeline."

We will have more to say about Focus Group activities. But for now, keep in mind that even with the structured approach we are suggesting for focus group activities, you can expect the discussion at times to become free-flowing. This should not be cause for concern, especialy if the Focus Group Facilitator is adept at gently guiding the discussion back to the topics at hand.

An effective **facilitator** will:

- **make sure the viewpoints of "experts" do not dominate the focus group,**
- **ensure that all stakeholders get to air their views,**
- **keep meetings running smoothly,**
- **record all issues and comments raised by participants**

Much more could be said about Focus Group facilitation. Focus Groups provide a practical context in which important questions and issues can be raised. The quality of facilitation will have a direct bearing upon the effectiveness and credibility of the entire Evaluation. For those who are unused to facilitating meetings, or who feel the discussion is drifting too far from relevant topics, remember that a flexible approach works best. And remember that despite their diversity, participants identify with the need for improved emergency planning and response, a dialogue that respects all participants, a frank evaluation of resources *and* expectations, and, recommendations to official agencies such as the LEPC, fire and law enforcement officials and industry who can bring about actual changes.

Let's summarize the mission of the Focus Groups. Using mutually agreed upon accident scenarios as platforms for discussions, the participants in these meetings raise issues, discuss expectations and create accident response time lines that are measured against the expectations of the various stakeholder groups. The Focus Groups should:

- **study the industrial site's more probable accident scenario**
- **discuss in detail the responsibilities and specific response of facilities, official agencies and the community to a chemical incident**

- **consider emergency response plans, lines of authority and standard operating procedures and underlying assumptions**
- **discover problem areas**
- **analyze public awareness and education programs as well as public notification systems during emergencies**
- **map out specific responsibilities: who does what, when, where and how?**
- **develop a time line of activities for their specific focus group (Community, Industry, Emergency Responders) describing the group's response to a chemical emergency**
- **record all comments for discussion at general meeting**

This is a list of the major activities of the Focus Groups. Development of a time line in response to a more probable accident scenario is the core activity of the group.

A few other suggestions and observations concerning **focus groups**:

- **Although multiple facilities were involved at the four area assessments in the Kanawha Valley, we used one common scenario at each site in order to simplify the discussion. During the general session, however, participants were free to address questions and concerns to any and all manufacturing facilities represented.**
- **A video of a recent in-plant drill helps stimulate discussion**
- **General and detailed maps of the industrial site and surrounding area are helpful**
- **Remember in scheduling meetings that it is usually easier for citizens to take part during evening meetings**.
- **Remember, there is no such thing as a "bad" question. The facilitator should write down all comments and questions**

V. Getting Started

I.
Establish a Steering Committee with representatives of the major stakeholder groups -- industry, emergency responders and the community.

I. Establish Steering Committee

The first step in getting started is to form a Steering Committee. This can start out as an *ad hoc* committee of your LEPC. Or it can build upon other existing organizations, such as Citizen Advisory Panels (CAPs). What is most important is to strive for a representative balance on the Steering Committtee. The major stakeholder groups -- industry, responders and the community -- should be represented.

II. Secure commitments of major stakeholders

II.

Secure commitments of major stakeholder to the goals, methods and uses of the Evaluation.

The first duty of the Steering Committee should be to secure commitments on the part of major stakeholder groups to participate fully in the Emergency Response Evaluation meetings and surveys. This is a critical step and one that will take considerable effort and time. Personal visits are the best, and we recommend being as specific about details and expectations as possible.

In explaining the process to industry representatives and emergency responders, keep in mind that they work in a hierarchy. It's important to talk to the person(s) who might actually be assigned to the Evaluation. But remember that the emergency responders and planners and plant environmental, health and safety personnel you might want to participate may lack the authority to make such a commitment of time. You will probably also need to talk to their supervisor, plant manager or director to secure an official approval.

In presenting your case to potential participants in the Evaluation -- whether "insiders", i.e., company or emergency responders, or concerned citizens -- we suggest you discuss:

- The **goals** of the process: an open airing of emergency response issues from the industry, community and emergency response viewpoint, improved communications and personal contacts between the various stakeholder groups, and, most importantly, recommendations that can lead to improved emergency plans and responses.

- The **methods** to be used: public meetings and focus groups as well as surveys. More probable accident scenarios were used as the vehicle for discussions and to generate an emergency response time line and issues related to the time line,

- The **uses** of the Evaluation: RMP compliance for industry, and recommendations for improved emergency response to decision-makers in industry and the official emergency response community,

- The **time frame** in which the meetings are to take place, and

- The **commitment** you expect in terms of time, personnel and support activities. Specifically, this commitment -- for all groups -- includes:
  - attending three general meetings,
  - participating in one to three focus group sessions,

In addition, you should point out that industry will be expected to provide:

- More probable **accident scenarios**,

- **Meeting rooms** (if possible at a "neutral," off-site location) and refreshments

- **Facilitators** (if it is not possible to hire professional, outside facilitators)

- Some **secretarial support** for typing, photocopying and sending out meeting notices

Industry should also know in advance that at the first general meeting (see page 41), they will be expected to present basic information about their facility. In cases where several plants are being covered in the same evaluation, all facilities should make presentations. Their presentations should include:

- basic products of plant
- number of employees
- nature of the chemical being used for more probable accident scenario
- description of the more probable accident scenario.

"If I had it to do over again, I would do a lot more preliminary groundwork, get commitments in writing, sell the process to plants, make sure plants really understand the whole point so they don't get suspicious..."
-- one organizer of Kanawha Valley Evaluation

On the following page, we have included basic information presented at the first general meeting by one chemical facility in the Kanawha Valley project.

But first, one more note about organizing an Evaluation: It is your decision how to handle Evaluations in areas with several chemical facilities. This is not an uncommon situation. To expedite the process in multiple-site Evaluations, we asked all facilities to present background information, including accident scenarios. But only one plant's scenario was used to develop emergency response timelines. At general meetings, participants should feel free to ask questions concerning emergency response capabilities at any plant.

INTRODUCTION

The plant, which employs 155 salaried and 622 hourly workers, uses Chlorine to produce phosphorus trichloride. Chlorine is stored under pressure as a liquid and vaporizes when released, forming a greenish yellow gas. It has a strong pungent odor similar to chlorine bleach.

DESCRIPTION OF OUR MORE PROBABLE ACCIDENT SCENARIO

- **A railcar is moved while still connected, breaking the liquid unloading hose**
- **The excess flow valve on the railcar automatically closes**
- **Field sensors detect the leak and alert the operators who close a valve within five minutes, limiting the release to 765 pounds**
- **The weather is the worst recorded in the last five years**
- **Beyond one mile downwind, the concentrations are below the Emergency Response Planning guidelines (ERPG, level III limit**
- **Beyond three miles downwind, the concentrations are below the ERPG-II limit**

In addition, it is helpful to have industry hand out a computer-generated plume diagram illustrating the ERPG zones superimposed upon a local map. For Focus Group purposes, it is helpful to have a general map of the plant and vicinity. A video of a recent emergency response drill at the facility is also helpful.

III. Train focus group facilitators

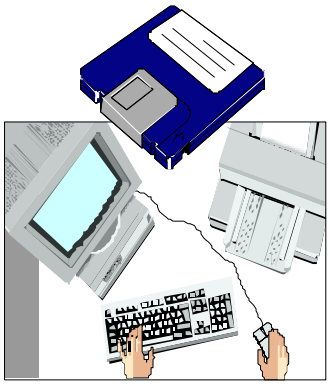
III.
Steering committee secures training for focus group facilitators

We suggest that a member of the Evaluation Steering Committee facilitate the three general meetings. But you will also need facilitators for the three focus groups (Emergency responders, Industry and Community Emergency response). In your situation, it may possible to find these facilitators from your LEPC or local community members. Most likely, however, they will come from the ranks of industry. This was not a problem in the case of the Kanawha County Evaluation, although in retrospect, we feel that facilitation would have been more consistent if the Steering Committee had provided at least one training session.

IV.
Steering Committee develops surveys of emergency response organizations and the community

IV. Steering Committee develops surveys

The time has come for the Steering Committee to develop surveys for emergency response organizations and the concerned citizens**.** You may also decide to develop a survey for industry participants. The purpose of survey tools is to provide quantitative, comparative data that can be used in making recommendations. Surveys conducted during the Evaluation Process provides another important source of information upon which to base recommendations.



Survey forms were developed for:

- **citizens**
- **fire departments**
- **hospitals**
- **law enforcement agencies and**
- **emergency medical services**

.

Survey questions

The specific responses from these organizations are available from the Kanawha Putnam Emergency Planning Committee. For the purposes of this publication, the *questions* asked are of more interest. Those with asterisks were compiled as tables, with names of departments listed horizontally at top and categories/questions listed vertically at the left. Others were described in prose style or in simple lists.

Fire departments

A. **Personnel***:
Total fire fighters, shifts per day, minimum on duty, minimum on call, number of substations.

B. **Vehicles**
Number of engines/pumpers, ladder trucks, rescue vehicles, water rescue vans, rescue boats, chief cars, snorkel units, foam trailers, etc.

C. **Fire Stations**
Includes substations; manned/unmanned.

D. **Notification***
How fire departments are alerted in a chemical emergency: phone, Medbase, radio, plectron, scanner, fax, 911, siren.

E. **Personnel Notification***
How personnel are notified of a chemical emergency: phone, radio, pagers, siren.

F. **Communications**
Lists communications by telephone, radio and fax between following response organizations: metro/country communications center, county Office of Emergency Services director, city communications centers, local chemical plants, emergency medical services, law enforcement, hospitals, fire departments, Medbase and others.

G. **Public Notification**
Public address systems, firefighters going door to door, sirens, etc.

H. **Information resources***

Resources used to obtain information on involved chemicals during a hazardous materials incident, including: Material Safety Data Sheets (MSDS), EPA Tier II forms, facility coordination, manufacturing, shipper, transporter, poison control center, Chemtrec (contact Chemical Manufacturers Association, CMA) , on-site computer database, industry hazardous materials teams, in-house hazardous materials teams, shipping papers, county Office of Emergency Services , other.

I. **Monitoring equipment**

Equipment available to monitor levels of hazardous chemicals, for example: AIM 3000 and Biosys III, explosive level, oxygen and carbon monoxide, AIM 4501, hydrogen sulfide, CGI, Draeger tubes, hydrocarbons, ammonia.

J. **Chemical Protective Equipment** (CPE)

K. **Decontamination equipment**

Portable shower units for decontamination, fixed decontamination equipment including water tank.

L. **Training**

For more complete information on training levels, contact the KPEPC. The general categories listed on the survey were FRAL (First Responder Awareness Level), FROL (First Responder Operations Level), ICS (Incident Command System) and MCTO (Managing Company Tactical Operations). Other training categories included HazMat Technician Level, EPA and IAFF (International Association of Firefighters) HazMat courses, firemanship I and II, LP gas emergencies, EPA hospital emergency room haz-mat decontamination courses.

M. **Respirator programs**

Specifically respirator programs in compliance with OSHA standards.

N. **Planning**

Planning for: chemical emergencies, evacuation of citizens, security of evacuees, traffic diversion. Also departments responded that have a copy of the KPEPC emergency plan. Some departments use the County Pocket Plan.

O. **Mutual Aid Agreements**

Asks for names of other departments with whom they have agreements.

P. **Exercises** (drills)
Asks how often -- quarterly, biannually, yearly departments participate in community/multi-jurisdictional exercises.

Q. **Exercise planning**
Asks how often.

R. **Improvements needed*** (self evaluation)
Possible areas in which, according to the self evaluation, improvements are needed include: inter-agency, alert procedures, training, plan development, Personal Protective Equipment (PPE), personnel notification, emergency plan development, community notification, haz-mat resources, public education, exercises, plan updates.

II. Hospitals

A. **Capabilities**
Examples: 24-hour facilities include what type of capabilities, have supplemental EMS vehicles, etc.

B. **Notification**
How hospital is alerted, how off duty personnel are notified.

C. **Communications**
Asks how hospital communicates with Metro Communications, county OES director, local chemical plants, EMS, law enforcement, hospitals, fire departments.

D. **Public notification**

E. **Information resources**
For example: Poison Control Center.

F. **Training**

Percentage of staff trained in FRAL, ICS, MCTO and management of chemical emergencies, haz-mat decon, and respirator program in compliance with OSHA standards.

G. **Planning**
KPEPC plan, the hospital's own plan, e.g.

H. **Mutual aid**
Examples: mutual aid agreements with National Guard, other hospitals, backup power (diesel) providers, county OES, public service commissions, etc.

I. **Exercises** (drills)
Asks about frequency of exercises using KPEPC plan, participation in multi-jurisdictional exercises, hospital's own exercises.

J. **Self assessment** (improvements needed)
Regarding interagency communication, alert/notification procedures, training, hazardous materials resources and exercises. Can include many more categories.

III. Emergency Medical Services (EMS)

A. **Personnel***
Number of: personnel, on-duty personnel, shifts, volunteers, Emergency Medical Technicians (EMTs), paramedics, first responders, e.g.

B. **Vehicles**
Includes the specific type of vehicle.

C. **Notification**
By Metro 911, plectron radio, chemical companies, base station radio.

D. **Other notifications**
How off duty personnel are notified -- by radio, pager , dispatch telephone, e.g.

E. **Communications**

Looks for possible gaps in communication. Means listed were telephone, radio and fax.

F. **Public notification**
Whether EMS has responsibility to alert public; under whose authority this notification could take place, for example, if directed by incident commander or fire department.

G. **Information resources***
Asks for response to same information sources listed in question H. under category, Fire Departments.

H. **Monitoring resources**

I. **Portable decontamination equipment**
Portable showers, portable decontamination units for use on ambulances, portable tubs, water tanks, plastic sheeting, eye wash kits.

J. **Training**
Percentage of personnel trained in FRAL Firemanship I and II, FROL, MCTO, training conducted by industry, R & I HazMat Training, and respiratory program in compliance with OSHA standards.

K. **Planning**
Which plan, what is covered and not covered, existing mutual aid agreements.

L. **Exercises**
How often, is it multi-jurisdictional, who is involved, what is the nature of the scenario.

M. **Self assessment** (improvements needed)
Areas listed included, training, community notification, funding, interagency communications, PPE, hazardous materials resources, exercises, plan development. This information would work well in a table format.

IV. Law Enforcement Agencies

(local police, sheriff's department and state police)

A. **Personnel***
Number of officers, shifts per day, on duty officers at any given time, officers on call out.

B. **Vehicles***
Asks for number and type of vehicles, including regular cruisers, four-wheel drive trucks, unmarked.

C. **Notification** (chemical emergency)
Phone, scanner, direct line to chemical plant, Metro 911, sheriff's department, pager, fax, radio, e.g.

D. **Personnel notification**
Telephone, pager, dispatcher telephone, e.g.

E. **Public notification**
Asks whether law enforcement has public notification duties.

F. **Information resources**
[See Fire Departments, question H.]

G. **Monitoring equipment**
[Often not available]

H. **Personnel Protective Equipment** (PPE)
[Often not available]

I. **Decontamination equipment**
[Often not available]

J. **Training**
Asks percentage of personnel trained to FRAL, ICS, management of chemical emergencies, MCTO, in use of the *Emergency Response Guidebook*; also asks whether departments have respirators programs in compliance with OSHA.

K. **Planning**
Asks which plan is to be used, whether plan addresses chemical emergency, evacuation, security of citizens, and traffic diversion issues.

L. **Exercises** (drills)
Asks frequency and type of drills, whether drills were multi-jurisdictional.

M. **Self assessment*** (improvements needed)
[same response categories as Firefighters, question R.]

V. Community survey

Community responses were divided into responses from home, business and school.

A. **Communications***
1. Asks how citizens in the three community response categories are notified of a chemical emergency by one or more of the following: warning siren, regular television, plectron, pager, cable intercept, radio (EBS), telephone.
2. In a separate response under the heading communications, also asks, Do you feel the warning system in place is adequate? Allows for suggestions for improvement. An example of the type of suggestion was: establishing a single, unique warning system.

B. **Information, education, training**
This information lends itself well to a table format. Asks the following questions:
1. Have you viewed a training video on shelter in-place?
2. Are you aware of any training exercises conducted by your local chemical facility/facilities?
3. Would you like to participate in or benefit from neighborhood training exercises conducted by your local chemical facility or the KPEPC?
4. Are you aware of any education and/or training programs conducted in your area for emergency preparedness and response? (Respondents were asked to comment)

C. **Summary of Citizen Responses**

Asks citizens to pose questions, make suggestions. This section yielded many valuable ideas. Here are a few examples: "Who controls 911 -- the county or city?" "I'm concerned about how the hearing impaired in the community can receive proper notification." "After the incident, children's parents heard of the (chemical) incident. They came out and picked up their kids (from the school). In the process, this contaminated their cars and the school." "We need to establish a method for evaluating homes for adequate Shelter In-Place."

V.
Set times and places for initial meeting place and date, and invite participants.

V. Plan meetings

Once the cooperation of these stakeholder groups is secured, the Steering Committee should formally set an initial meeting place and date. We recommend a neutral site -- a school or community center. Citizen participation will be best if meetings are held during the early evenings. Again, we point out that the question of participation is crucial. Securing the participation of industry and the emergency response community should be relatively easy. Identifying and inviting key community participants, however, can be a challenge. You must design every step of the process to encourage community involvement.

As one Evaluation Steering Committee member put it, "Remember, you're working with volunteers who have lives and jobs and crises outside the emergency response field. You've got to work these realities into the Evaluation if you want a meaningful and valid process."

We have already discussed several potential sources of community partipation. In the Kanawha Valley, we targeted etablished leaders who represented segments of the population, grassroots environmental organizations that should be involved and members of Citizen Advisory Panels (CAPs) and similar groups. Work hard to identify leaders. And find out whether any industry-citizen forums exist in your area.

And again, written invitations and advertisements in local media can help introduce the goals and methods of the Evaluation. These are helpful first steps, and offer the possibility of bringing newcomers in the process. But the best way to secure a commitment from hardworking participants is through personal contact. Because you are asking citizen/volunteers to make a commitment of their personal time to attend four to six meetings, you need to make a phone call or personal visit.

VI. Hold first general meeting

VI.

First general meeting - Facilitator introduces purpose, methods and goals to industry, concerned citizens and emergency responders and planners. Discuss focus groups. Assign participants to specific focus group. Hand out surveys.

The **first general meeting** serves many functions. A member of the Evaluation Steering Committee should fill the role of facilitator and:

- discuss the purpose, methods and goals of the process, stressing that an open airing of all viewpoints is to take place,
- briefly explain the legal framework (RMP) that serves as the backdrop for the project, and familiarize participants with the general nature of accident scenarios,
- discuss the duties of the Industry, Emergency Responder and Community Focus groups,
- each facility makes a presentation that includes an overview of the plant (products, processes, number of employees) and an explanation of their more probable accident scenario,
- assign participants to focus groups. In some cases, focus groups actually held short meetings at the end of the first general meeting.

In making focus group assignments, it is important to remember that the citizens' voices are to be heard at every step of the process. Therefore, "experts" may numerically dominate the Emergency Responder and Industry Focus groups, but it is essential that concerned citizens also be assigned to these groups. It is not enough, however, to simply assign citizens to these focus groups. The focus group facilitators must be especially sensitive to the fact that while concerned citizens might lack the technical and professional terms, this is no competition. Treat the comments of concerned citizens carefully!

During the Kanawha Valley process, four sites representing more than a dozen individual chemical manufacturing facilities participated in the four area meetings. At the first general meeting, each facility presented its more probable accident scenario. But to expedite meetings, only one scenario was chosen for focus group discussion. The rationale behind this was that emergency response essentially would be similar, regardless of the specific chemical or manufacturing facility.

One procedural suggestion for all general meetings and focus group sessions: always circulate a **sign up list** that asks for name, daytime phone address and affiliation (community, industry, emergency responder). The sign up list has two functions. First of

all, you can use it to is list to assign participants to appropriate focus groups. Remember, it is important to have balanced participation. Your goal should be to have at least one member from each of the stakeholder groups in each focus group. Secondly, the sign up list will later enable you to mail updates to all participants regarding the status and final outcomes of their recommendations.

VI. Focus group meetings

VI.

Focus groups meet, devise time lines, raise issues.

The next step is for the three focus groups (Emergency Responders, Industry and Community) to meet to devise time lines and raise issues. Again, it is important to the effectiveness and credibility of the Evaluation that there is considerable "crossover" in focus group assignments. The Emergency Responder focus group, for example, should consist *primarily* of emergency responders but should also have at least one representative from industry and from the community. The same holds true for the Industry and Community focus groups.

The credibility and objectivity of the emergency response evaluation depends upon including a representative cross section of viewpoints, expertise and concerns. Having "outsiders' sit in on the various focus groups is actually very helpful. It's surprising how many good questions outsiders ask. Often, these questions and concerns can be dealt with on the spot. But the facilitator should record all comments. This is a way of showing that issues have been addressed in a serious manner. In addition, during general sessions, it shows the three stakeholder groups that their perspectives on an issue can differ. An example of this occurred during our evaluation of emergency response capabilities in Nitro, West Virginia, which serves as home to two chemical facilities. Plant officials seemed pleased with their "all clear" signal inside the plant. But citizens pointed out that from their perspective, the siren was a potential source of confusion since it sounded similar to the all clear signal sounded by the community alert siren. The matter was quickly solved by an administrative decision by plant management to hold their "all clear" siren in the plant until they were assured that the community was also in the clear.

On the following pages we've included an example of a **timeline**.

A note about Timelines

◆Timelines make use of RMP-generated accident scenarios. In the Kanawha Valley Emergency Response Evaluation, we used *more probable* scenarios instead of worst case scenarios.

◆Timelines generated by the three stakeholder groups measure, first of all, describe *expectations*.

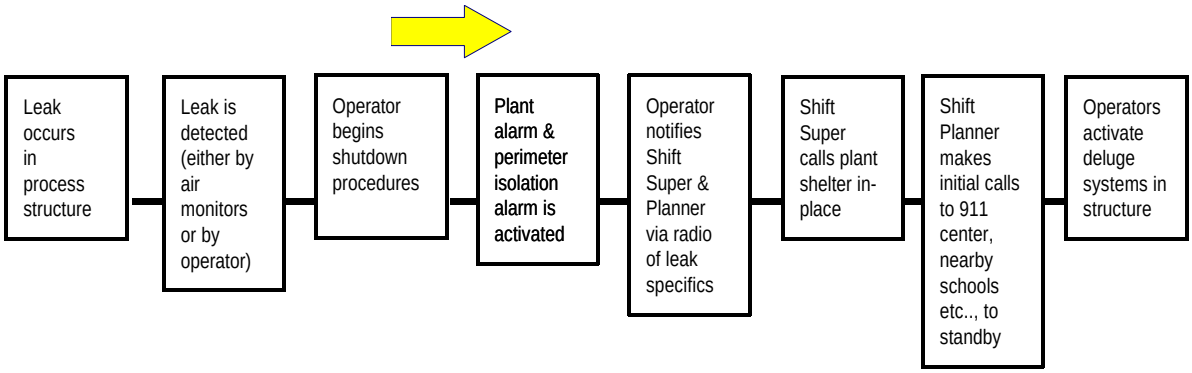
◆It's a natural part of the evaluation to discover ways in which expectations of stakeholder groups diverge.

◆To generate a *combined* timeline such as the one that follows, plants, emergency responders and members of the community must discuss their differing expectations and reach a general consensus about what would happen.

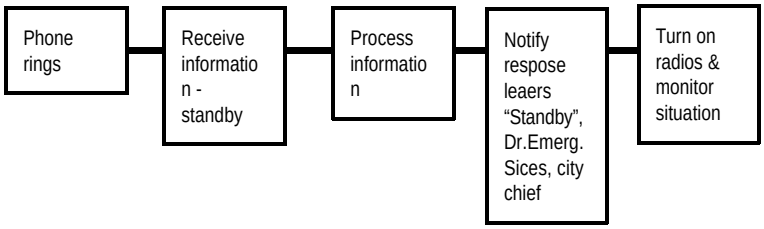
◆The sample timeline included here presupposes the following: the leak of 118 pounds of a highly hazardous substance from a hole in a metal gasket, presence of an in-plant response team, ability of plant officials to sound a community alarm, close proximity of schools and a college, existence of a county-wide 911 center, a local (volunteer) fire department, a computerized ring-down notification system and cable (TV) intercept capability.

Timeline 0 - 5 Minutes

Facility Response



Emergency Responders



Community Response

[no activities during first ten minutes]

Timeline 0 - 5 Minutes (continued)

Facility Response

Planner backup comes to help

Operations personnel don required Personal Protective Equipment & from remote positions begin process of isolating the leak

Approaching from upwind, Incident Commander & Emerg. Squad arrive on scene and establish Incident Command System

Operations Supervisor briefs Incident Command on magnitude of incident

After verifying wind direction, IC notifies planner to activate community warning systems, escalate incident to Response Alert, and active plant Emerg. Op. Center

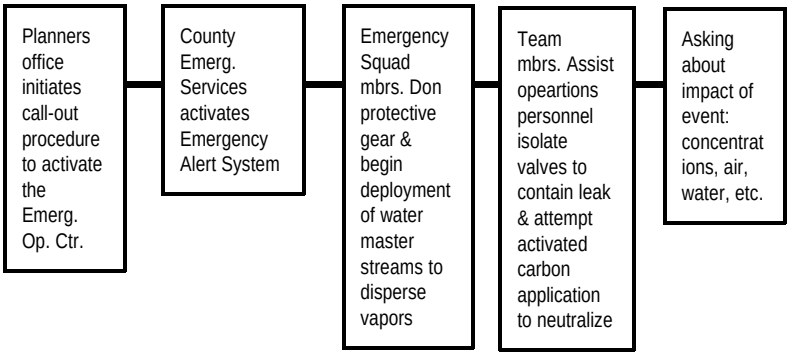
Planner initiates siren activation & makes follow-up calls to outside agencies, nearby schools, etc.

Emergency Responders

Community Response

Timeline - 5 to 10 Minutes

Facility Response



Emergency Responders

Community Response

Timeline - 10 to 20 Minutes

Facility Response

- Recommend shelter in-place to 911 Center
- Plant Emerg. Dir. Arrives on scene (arrival time depends on time of incident)
- Emerg. Dir. Assumes responsibility for external notification, begins radio contact to area Fire Chiefs and County Emerg. Services Dir.
- EOC mbrs. Begin to arrive at EOC & establish commuication link with nearby schools, college, etc.
- Outside calls come into EOC

Emergency Responders

- Phone rings
- Receive recommend-ation to shelter in-place
- Process informatio n
- Notify responders & community of shelter in-place
- Activate sirens
- Activate Tone Alert (Plectron) System
- Activate TV cable interrupt
- Issue Shelter In-Place announce-ment

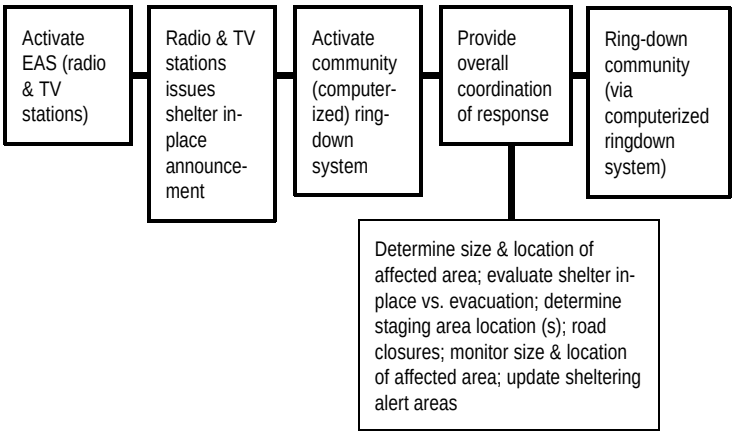
Community Response

- Expect call from computerized call-down system to 911 Center, nearby schools that there is an ongoing emergency and to shelter as a precaution
- Plant decides Shelter In-Place
- Community siren activated: calls 911, nearby schools, etc.

Timeline - 10 to 20 Minutes (continued)

Facility Response

Emergency Responders



Community Response

Timeline - 20 to 30 Minutes

Facility Response

- EOC faxes MSDS sheets to area hospitals
- Unit technical personnel arrive at incident scene, help in mitigation
- Media spokes-person drafts standby statement
- Plant technical rep arrives at 911 Center
- Emergency Squad increases or decreases zones to establish perimeter of incident
- Off-duty squad members called to staging areas
- Emerg. Director maintains frequent updates to outside responders

Emergency Responders

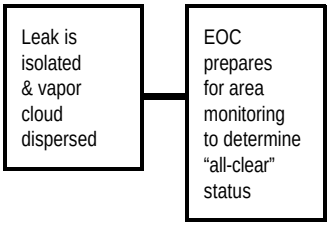
- Firefighters report to firehouse
- Law enforcement determines personnel availability
- Ambulance(s) report to staging area

Community Response

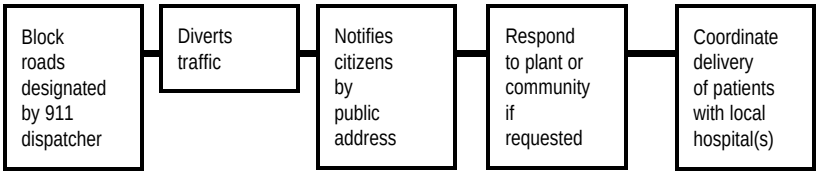
- 911 Ctr. activates warning system: cable TV intercept, schools, radio, EAS
- Local Fire Depart. goes door to door
- Most of town alerted
- Go inside/ stay inside
- Turn on TV/radio
- Turn off heating, ventilation, air condition-ing
- Close windows & doors
- Go to interior room
- Continue to listen to EAS

Timeline - 30 to 45 Minutes

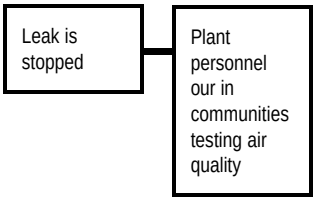
Facility Response



Emergency Responders



Community Response



Timeline - 45+ Minutes

Facility Response

- Monitoring completed around incident area
- Plant all-clear given
- Emerg. Dir. Notifies agencies of all-clear & arranges for community monitoring in affected area
- Community Industrial Hygienists monitoring done
- After monitoring is complete & negative readings are taken, all-clear is authorized by County Emergency Services Director

Emergency Responders

- Issue all-clear signal
- Deactivate sirens
- Deactivate cable interrupt
- Deactivate EAS
- Prepare for ring-down of community
- Notify responders
- Ring-down community

Community Response

- Radio back with community all-clear (one-mile away)
- All communities clear (three miles away)
- Plant tells 911 Ctr. All-clear
- 911 Ctr. activates Emergency Warning System: cable interecept, EAS, schools, all-clear
- Community ventilates & vacates homes, businesses
- Return to normal activities without ventilation

VIII.
Hold second general meeting

VIII.

Second General Meeting - focus groups present rough time lines and issues for discussion

At the second public meeting, the focus groups present their rough time lines and related issues for discussion. The focus group facilitator, or someone chosen from the group, makes the presentation.

Following this meeting, time lines need to be combined, then duplicated to hand out at next meeting. This takes considerable time and effort. In the case of the Kanawha Valley effort, chemical plant personnel had the expertise and equipment necessary to complete this task. In other areas, industry, businesses, the LEPC or government agencies may be able to perform these services.

IX. Hold third general meeting

IX.

Third & final general meeting: time lines presented and compared, issued listed; participants fill out evaluation form

By the final general meeting, time lines and issues presented at the previous general meeting have been combined and duplicated. This information is presented to the entire group for final comments and discussion.

This is also the time that the General Meeting Facilitator should review the goals of the Evaluation, reiterate issues raised, explain to all participants what happens now, and set up a mechanism for feedback about the final outcomes of suggestions.

X. Categorize & evaluate information

X.

Steering committee begins to categorize and evaluate all information in order to generate recommendations

Following the presentation of a combined time line and discussion of issues at the third and final general meeting, the Emergency Response Evaluation Steering Committee must begin internal meetings to review all information generated to date. This requires dealing not only with time line discrepancies and other issues raised during general meetings and focus group sessions, but also interpreting data gathered from surveys of emergency responders and the community. This evaluative phase should help generate findings and recommendations. Note, also, that the Steering Committee might decide it needs further information, and might decide to schedule plant tours and/or follow up sessions with various stakeholder groups.

The final evaluations and findings of the Steering Committee reflect months of preparation, recruiting efforts, general meetings, focus group sessions and follow-up work. It will be no easy task to sort through the lists of observations, concerns and issues raised by the various stakeholder groups. Before starting full blown discussions about the merit and importance of the specific information you have gathered, we suggest the Steering Committee first spend some time organizing the information. This can be accomplished by categorizing comments and observations into the following four basic categories before deciding upon final recommendations:

- **Planning**
- **Communications**
- **Resources**
- **Education, training, drills**

Organizing the information you've gathered into these categories should help you avoid redundancies and set the stage for the next step, which is to *evaluate* this wealth of raw data and comments. Clearly, these categories are simply general guides. Some of the comments and data you've collected will not fit neatly into any of the four categories, or will fit into several categories at once.

As the Steering Commitee begins to discuss the raw results, we have developed a **Tracking Table** (see next page) to help:

- **Categorize types of concerns.**
- **Clearly state the committee's recommendation.**
- **Decide to whom you are going to report your recommendation.** (Note: It is often the case that you will want to make your recommendations to several entities. See **Tracking Table**, page 61.
- **Track when and to whom you made your recommendations.**
- **Stay up-to-date on the status or final outcome of your recommendation and include a mechanism for reporting this information to all participants.**

Tracking Table*

Concern	Recomm-endation	Communicate to whom?	Notified (date)	Current Status/ Final Outcome
COMMUNI-ATION Confusion over initial notification by plants of emergency	Use plain language to describe event, not outdated and confusing "Code X" or "status X".	A. LEPC general membership B. LEPC communications committee C. LEPC planning committee D. LEPC drill committee E. 911 Center F. All plant managers and plant emergency response	A. 1/30/97 B. 1/30/97 C. 2/4/97 D. 2/6/97 E. 1/30/97 F. 2/15/95	A. Sent letter to state Chemical Council in support B. Called Deer Park, Texas, LEPC and got copy of simple notification terms used there. Copies sent to all plants and to 911 C. Modified Plan to include language from Deer Park LEPC D. Sent memo to all plants with recommendations to use Deer Park language while notifying
COMMUNI-ATION The traveling public might not receive notification	Explore special radio band capabilities	A. LEPC general membership B. LEPC communications C. State Police D. State Department of E. Transportation	A. 1/30/97 B. 1/30/97 C. 2/20/97 D. 2/20/97 E. 2/20/97	A. Directed Communications Committee to set up meeting with State Police, DOT.
COMMUN-CATION confusion caused by plant all-clear siren sounding much like the community alert siren	Ask plant to use on-site public address system instead of their all-clear signal	A. LEPC general membership B. LEPC communications C. Plant managers D. Citizens Advisory Panels	A. 1/30/97 B. 1/30/97 C. 2/20/97 D. 2/20/97	A. Directed Communications Committee to set up meeting w/plant mgrs and CAP mbrs. B., C. & D. met 3/15/97. Plants agreed to wait for community all-clear.
COMMUNICATI ON Lack of car-to-car radio comparability between police departments, sheriff's department and state troopers	Ask law enforcement agencies to assess needs; recommend administrators (county commission, etc) purchase of appropriate equip.	A. LEPC general membership B. LEPC communications C. Police chief & city council D. Sheriff & county commission E. State Police	A. 1/30/97 B. 1/30/97 C. 2/4/97 D. 2/6/97 E. 1/30/97	A. Directed Communications to set up meeting --held 5/11/97. Recommendations sent to city council, county commission, law enforcement joint committee of state legislature. Matter still pending.

*The concerns, recommendations and outcome tracking included in this Table are only loosely representative of the Emergency Evaluation undertaken in the Kanawha Valley.

Tracking Table (continued)

Concern	Recomm-endation	Communicate to whom?	Notified (date)	Current Status/ Final Outcome
EDUCATION / TRAINING / DRILLS Scope of drills too narrow.	Expand scope of drills to large area of impact.	A. General LEPC membership B. LEPC Drill Planning Committee C. Citizen Advisory Panels (CAPs) D. Plant personnel responsible for drill planning	A. 1/30/97 B. 2/12/97 C. Not yet done D. Not yet done	A. Agree - assigning direct responsibility to Drill Committee to liaison with B., C. & D. B., C. & D. - pending
RESOURCES Decontamination equipment/supplies	Survey area hospitals for decon equip. & supplies: network overview with all hospitals	A. General LEPC membership B. LEPC members from area hospitals	A. 1/30/97 B. 2/13/97	A. Assigned responsibility to LEPC Executive Director to gather information, share w/area hospitals and include in LEPC plan.
RESOURCES How to deal with shoppers and public transportation (busses) during an event	Communicate proper protective actions to businesses and country transportation reprereresentatives, encourage membership in LEPC	A. General LEPC membership B. LEPC planning committee C. LEPC membership committee C. Chamber of Commerce D. County-wide Bus System E. County Commission	A. 1/30/97 B. 2/14/97 C. 2/12/97 D. 3/4/97 E. Scheduled for 6/17/97	A. Assigned Planning Committee principal follow up duties, encouraged a review of legal responsibilities of businesses B. Contacted Chamber, Bus System, encouraged their membership in LEPC & offered guidance C. Chamber will assign one staffer as LEPC mbr. D. Bus Director will become member & work closely with Planning & Drill Committees E. Pending

Additional questions and issues raised by Steering Committee

In addition to the surveys of fire departments, law enforcement, EMS, hospitals and concerned citizens, the Steering Committee itself developed several issues and questions through the Focus Group process. Such questions and issues may lead to additional recommended actions included in the final report and reflected in the Tracking Table. They include:

Information needed from the plants:

How long will it take to discover a problem?
How long will it take to contain the problem?
How will notification of the community occur? How soon? How far away from the plant?

Who is the community?

Special needs populations?
The traveling public.

What does the community need to know about the emergency?

What kind of emergency is it?
What chemical?
What problems might it cause?
What areas of the community will most likely be affected?
What is the recommended protective action -- shelter in-place or evacuate?
Instructions need to be precise and thorough. Many members of the public may not know what to do.

Notification issues

Does the community recognize the difference between internal (plant) alarms and the community siren?
Does the community understand the siren and tone alert?
When does testing occur?
Telephone ring-down system -- how adequate?
Emergency Broadcast System -- TV, radio, cable intercept
Door to door notification may be possible in some areas but impossible in others
Many people will hear of the emergency on scanners. How does that affect community response?
Schools notified by Plectron radios or pagers. Are they drilling shelter in-place procedures in an effective manner?

News media may provide the first information to the public. Reports may be inaccurate due to lack of information and calls in from the public. How can media

reporting be more accurate?

Public response issues

- When the public is notified, will they take actions to protect themselves?
- What is needed to improve public response to emergency instructions? Better instructions, more education efforts, drills and education within neighborhood groups, associations, other organizations.
- Are there shelters available for those traveling though the emergency area and for children waiting for school buses.
- Several problems occur when the public is notified -- people go outside to watch, instead of sheltering, they make phone calls to friends, family, 911, firefighters and law enforcement; parents go to pick up children at school.
- The public needs frequent updates from EBS/media
- Does the public really know what the "all clear" signal means?

Additional note: Positive feedback is important. The Evaluation should not only point out weakenesses and area in need of improvement. This is also an excellent point in the process to remark on the **strengths** of the various stakeholder groups. Some examples might be:

- strong willingness to cooperate with officials,
- use of Incident Command System,
- strong mutual aid system,
- supportive Emergency Alert System personnel,
- high level of public awareness that the first step is to shelter in-place, that is, to go inside, shut windows and HVAC systems, turn on the television and/or radio and stay off the phone.
- frequent drills that test the county-wide plan,
- "hot line" back-up communications system,
- celluar networking,
- presence of highly-trained facility hazardous materials response teams,
- emergency information in phone book.

XI. Follow Up Meetings Before making final recommendation (Optional)

XI. Hold follow up meetings with stakeholder groups (optional)

If Steering Committee members feel that additional information is needed, follow up meetings can be scheduled wiith representatives of various stakeholder groups. These optional meetings could be used to discuss preliminary findings and solicit opinions regarding strengths and possible areas needing improvement.

XII. Present your recommendations

XII.

Steering Committee: make presentations to Local Emergency Planning Committee, community participants, industry and emergency response agencies.

Presenting the findings and recommendations of the Evaluation is a critical step, and one that has many immediate and longterm implications.

The immediate task is to file your initial report with the responsible committee -- or committees -- of your LEPC. Then report to the sponsoring agency and to decision-makers in industry, emergency response agencies, county and city government and the concerned citizens. The most direct purpose of these months of preparations, public meetings and Steering Committee work is to encourage positive improvements in local emergency response. As indicated in the **Tracking Table** on the preceding pages, recommendations usually go to several entities.

This is a time to be very systematic. A great deal of time and effort could be wasted unless you target your comments to specific decision-makers. A recommendation to increase funding should not end with a report to an LEPC committee. Instead, you need to report your recommendation to decision-makers who can implement policy changes and financial decisions -- for example, your County Commission, plant managers, your State Emergency Response Commission, etc. Another consideration is how to make the most effective presentation. We recommend using a greatly enlarged copy of the timeline. Photocopying services can also mount the enlargement on foam board for a fee. Using these methods, a typical timeline might use five to six 36" by 24" foam boards. Slides can be used to quickly explain your findings. It’s also a good idea to reinforce the message with handouts.

XIII. Establishing follow-up procedures

XIII.
Follow up process: tracking and reporting to LEPC on status and final outcomes of recommendations

You have secured the participation of all major stakeholders in an Emergency Response Evaluation. General meetings and Focus Group sessions have been conducted in such a way that industry, emergency responders and concerned citizens have interacted in a meaningful way. You have opened up lines of communication between these groups, and provided an organizational framework and, just as importantly, a human network that can lead to improved relations and better emergency response. Your Steering Committee has carefully organized and evaluated the comments, questions, concerns from meetings as well as the considerable quantitative data from surveys.

Except for one important step, you evaluation process is completed.

Next comes the follow-up process, which consists of using a **Tracking Table** (see pages 61-62) as a mechanism for organizing, tracking and reporting results to all involved in the process. It is simply not enough to make "good" recommendations. Those who have financially sponsored the Evaluation, your Steering Committee members, the LEPC, as well as those who have spent a great deal of time in meetings, want and deserve to know what has resulted from their hard work.

We suggest that at regular intervals -- every three to six months -- you use the mailing list established during the Evalulation to update those involved. You could chose to simply mail an updated Tracking Chart. That way, participants will be reminded of final outcomes of issues raised by many sources. Don't be surprised if at times you have to report that action upon a recommendation or issue raised during the Evaluation has either been delayed or rejected outright. The important thing at this stage is to provide honest feedback to those who were involved in the process. This reinforces the notion that even though all recommendations did not result in a corrective action, decision-makers have given serious study to the issue raised. Because of lack of funding or other obstacles, it may take years for some of the best ideas about emergency response to come to fruition. That should not deter you, nor does it reflect negatively on the process.

Meetings - Review

Organize steering committee, explain process to stakeholder groups, secure commitments

Steering Committee: planning phase

- Train focus group facilitators, develop surveys
- Set meetings, invite stakeholders

Public meeting phase

- First general meeting
- Focus group sessions (1 - 3 sessions)
- Second general meeting
- Third (and final) general meeting

Steering committee: evaluation meetings, presentations, follow up

- Organize, then evaluate comments and data.
- Make recommendations and establish tool for tracking current status / final outcomes

Conclusions & Recommendations

The Emergency Response Evaluation described here takes time, commitment and a willingness to cooperate. It is a big responsibility for all those involved, and puts a particular strain upon concerned citizens who want to participate but who receive no compensation.

An Emergency Response Evaluation takes time, commitment and a willingness to work together. Its more immediate benefits are:

◆real improvements in planning and response
◆ greater awareness of problem areas
risk reduction measures
◆ greater awareness of strengths of current plans and capabilities
◆ feedback about how citizens view such issues as notification, protective actions and accident prevention

The benefits of the Evaluation -- to concerned citizens, industry and emergency responders alike -- are many. First of all, very real improvements in planning and actual response can result from the Evaluation. Some of these improvements will be discernible only to safety "insiders," while others are apparent to the entire community.

The process described in this report should also make all stakeholders more aware of problem areas and able to take steps to reduce those risks.

There are also several overlooked benefits from such a process: you can discover your emergency response *strengths* and, in the process, help educate the public about protective action measures. An Evaluation can also give emergency response and planning organizations valuable feedback about citizens' trust in -- and therefore, willingness to comply with -- protective action decisions such as sheltering in-place, evacuation or preparing to evacuate.

But these are the more tangible results. Let's making a sweeping statement: *Even if the process results in no immediate changes in emergency plans and response, it will be worth*

Even if the Evaluation results in few immediate changes in emergency plans and response, it will be worth the effort because it:
◆ has opened lines of communication
◆ established a foundation of dialogue and mutual respect upon which to build future progress.

the effort. Simply by bringing the various stakeholders together, lines of communication are opened. People get to know each other. And this can, in and of itself, lead to very positive developments in planning and future response. It's amazing how seldom industry, responders and the community come together to discuss these matters. In most communities, it's *never* happened. Dialogue opportunities are rare, and often have a value that far exceeds their immediate results.

The same holds true for surveys. Even if few concrete changes come about at hospitals, fire departments, law enforcement agencies and within industry response units, there is value in generating this information. First of all, it gives these entities a clearer idea of their own -- and each others' -- resources, training levels and potential strengths and weaknesses. Secondly, just by sharing this objective data, the efficiency of existing mutual aid arrangements among the various groups is strengthened. It's been our experience that people in the emergency response community share a strong willingness to help each other during an incident. They know what it means to put their lives on the line. They *want* to share resources and manpower to help their colleagues. But they're not always clear what they can realistically expect. An evaluation can help.

The dialogue and data generated from such an Emergency Response Evaluation, then, can have benefits in and of themselves. Dialogue, for instance, builds trust, establishes clearer lines of communication and can form a foundation upon which future improvements can take place. Often, simply getting together for a well-facilitated, goal-oriented discussion clears up misunderstandings. An example: in follow up discussions between law enforcement officials, the topic of lack of communications between local police, sheriff's deputies and state troopers again came up. It turns out that the State Troopers had recently established radio capabilities on a car-to-car basis with local police departments and deputies, but the police officers and sheriff's deputies didn't know it. Simply by sitting down and discussing communication issues, the problem -- a lack of knowledge about each other's resources -- was cleared up immediately.

Stakeholders also begin to understand each other's perspectives on issues. It can be startling for emergency decision-makers to find out what the community really thinks of emergency notification procedures, for example. In this give-and-take, it is also enlightening for concerned citizens to learn about technical issues relating to emergency response and planning. This type of exchange often revises citizens' expectations about what responders can accomplish in a given time frame during a quickly-evolving chemical incident. Plant neighbors, and for that matter, the media, often expect nearly instanteous assessments of the severity, duration and nature of a chemical incident. By sitting down with industry representatives and emergency response officials, though, citizens learn about the difficulties involved in quickly assessing a chemical accident, mitigating the problem and, protecting the public.

The Emergency Response Dialogue described in this report builds upon RMP work, and supports an ongoing process of improvements in emergency response planning, community relations and trust building.

Here is a quick review of issues, strategies, and recommendations mentioned in this report:

Topic: **Goals & Methods**	Be clear about the ◆ goals, ◆ methods, and ◆ uses of the Evaluation. Explain these fully to all stakeholder groups as you attempt to secure the participation.
Topic: **Credibility**	Build a process that has credibility with *all* stakeholders. Objectivity and open dialogue are essential. Environmental decisions reached in a spirit of compromise and mutual respect have far greater credibility.
Topic: **Public Awareness**	Before you start, consider local public awareness of environmental, health and safety issues.
Topic: **Dialogue**	Remember that dialogue between the various stakeholders has, in many communities, been spotty or non-existent. The dialogue process, if run democratically, has an enormous value in and of itself. Dialogue is the basis for trust.
Topic: **Finding common ground**	Concerned citizens, emergency responders and industry representatives have different perspectives. Make this work *for* you to build a more complete Evaluation.

Topic: **Group building**	What holds the Evaluation process together is a mutual concern for community safety, and agreement to take part in a dialogue. More specifically, all stakeholders are likely to agree on the need for: ◆ improved emergency planning and response, ◆ a dialogue that respects all participants, ◆ a frank evaluation of resources and expections, and, ◆ recommendations to decision makers
***Topic*:** **What industry gets**	The Emergency Response Evaluation can move industry toward compliance with RMP -- Risk Management Plan -- requirements, improve communications with plant neighbors and emergency responders, and improve interaction with emergency responders during an incident
***Topic*:** **Methods**	Meetings, surveys and follow-up evaluation are the key methods. The basic elements are: ◆ inclusion of all major stakeholder, ◆ use of "more probable" accident scenarios, ◆ sponsorship by either your Local Emergency Planning Committee, LEPC, or by industry, and ◆ establishment of a mechanism for tracking recommendations
***Topic*:** **What theEvaluation can show**	An evaluation is a powerful, credible tool to assess and improve emergency response, it shows that stakeholders can work together to effect positive change; and it proves that the public is willing and able to assimilate complex technical information in a spirit of positive change.
***Topic*:** **Who are the "stakeholders"**	The Evaluation targets three primary groups: ◆ industry,◆ concerned citizens and ◆ emergency responders and planners.
***Topic*:** **Citizen participation**	Community involvement in emergency planning is solidly anchored in federal law. The problem is to find ways concerned citizens can fully interact on technical issues related to planning for and responding to emergencies. Citizens should be involved from the start and at all steps of the process.
***Topic*:** **Accident scenarios**	Accident scenarios give shape to the Evaluation and help participants create emergency response time lines, discover discrepencies and identify issues.

***Topic*: Recruiting participants**	The Steering Committee has many sources of help in recruiting participants for the Evaluation: industry, your LEPC, emergency response agencies, existing citizen-industry forums (Citizen Advisory Panels, e.g.), the National Institute for Chemical Studies, grassroots organizations, churches, schools, civic groups.
Topic: Recruiting participants from the community	Whenever possible, find community leaders who can and will act as conduits of information between the Evaluation and the public. Don't shy away from inviting some of your most outspoken critics. Invite the media.
***Topic*: Recruiting from industry and the emergency response community**	Talk to the industry personnel who are likely to be assigned to the Evaluation, but don't forget you will probably have to get the committment of their supervisors, too.
***Topic*: Emotions**	Remember, the Evaluation not only brings up technical issues. Emergency response is also an emotional topic -- one that goes to the heart of what we hold dearest -- the safety of our loved ones. The Evaluation deals with real-world risks.
***Topic*: Disagreements**	You can expect honest disagreements. We found, though, that the overwhelming response was of intense interest in finding solutions.
***Topic*: What citizens bring to the Process**	Concerned citizens often have the best perspective on what protective actions and notification steps have the trust -- and will be followed by -- the communty. Citizens are the best gauge of whether current public education efforts are adequate.
***Topic*: Accidents**	Accidents undermine public trust. But when they occur, we should learn from them. Even more than drills, they show what does -- and doesn't -- work.
***Topic*: Sponsorship & paying for the Evaluation**	Sponsorship, if possible, should be from a credible organization such as the Local Emergency Planning Committee. Industry is the most likely source of funding. The Evaluation is not an extremely costly undertaking except in terms of time committment.

***Topic*: Focus Group activities**	The Focus Group should: ◆study the more probable accident scenario, ◆discuss in detail the responsibilities of facilities, agencies and the community to a chemical accident, ◆consider existing emergency response plans, ◆discover problem areas, ◆analyze public awareness and education programs, ◆analyze public notification systems, ◆develop a time line for a response to a more probable scenario, and ◆record all comments for discussion at general meetings
***Topic*: Focus Group: other suggestions**	Other suggestions for Focus Groups: ◆schedule evening meetings if it makes attendance easier for citizen participants, ◆show a video of a recent in-plant drill, and ◆provide detailed and general maps of the plant
***Topic*: Focus Groups**	Hire a professional, "outside" facilitator if possible. If this isn't possible, be sure to train your facilitators to: ◆ make sure experts do not dominate the group, ◆ allow all stakeholders to air their views, ◆ keep meetings running smoothly, and, ◆ record all comments, especially relating to the emergency response time line.
***Topic*: Structuring the Evaluation**	We recommend: ◆A general meeting, ◆two- to three focus groups sessions, and, ◆two more general meetings. This is followed by the Evaluation process, which is completed by the Steering Committee.
***Topic*: Make up Steering Committee**	The Steering Committee should consist of representatives of the three major stakeholder groups: concerned citizens, industry and emergency responders and planners.
Topic: The role of the Steering Committee	The role of the Steering Committee is to ◆recruit participants, ◆secure financing, ◆develop survey tools, ◆organize and guide meetings, ◆hire/train Focus Group facilitators, ◆then organize, report and track recommendations.
Topic: Steering Committee organizes results	In organizing the results of surveys and meetings, the Steering Committe can use four basic categories: ◆planning, ◆communications, ◆resources, and ◆education, training and drills
Topic: Steering committee tracks recommendations	Using information organized into the four major categories, the Steering Committee should put all concerns/recommendations into a Tracking Tool that covers these five areas: ◆Concern, ◆recommendation, ◆communicate to (whom) ◆date notified, and, ◆current status / final outcome

***Topic*: Communications**	Communication capabilities are the most important -- and often the weakest - link of the emergency management process
Topic: Communications	Communication and emergency preparedness can be improved -- often without capital investments.
***Topic*: Communications**	An Evaluation opens lines of communication between the emergency response community, industry and concerned citizens.
Topic: Expectations	An Evaluation clarifies expectations. As we found out during public meetings, the expectations of citizens and emergency response professionals are sometimes at odds. It is important for the public to understand, for example, that in a chemical emergency, even the most sophisticated, multi-layered community alert system, for example, will not be able to reach everyone.
Topic: The importance of tracking recommendtions	Careful tracking of recommendations -- and periodic reporting of final outcomes to all participants -- ensures: ◆emergency response improvements actually get made, ◆participants have a sense that their work reaped positive rewards, ◆you set a positive example for future inclusive, dialogue processes.